

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 11

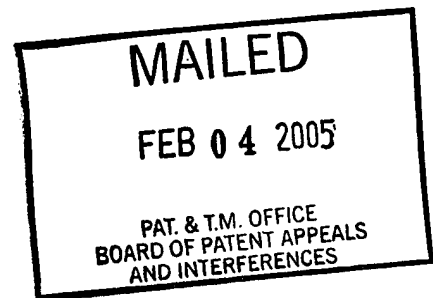
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID A. KISS

Appeal No. 2004-2296
Application No. 10/017,031

ON BRIEF



Before THOMAS, HAIRSTON, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-24, which are all the claims in the application.

We affirm.

BACKGROUND

The invention relates to packaging together a processor and different types of memory. A "cross-point" memory may include a recently developed type of high capacity memory known as a polymer memory. (Spec. at 2-3.) Claim 1 is reproduced below.

1. A packaged integrated circuit comprising:
a processor;
a volatile memory; and
a cross-point memory.

The examiner relies on the following references:

| | | |
|--------------------------|--------------|----------------------------------------|
| Mauritz et al. (Mauritz) | 5,276,834 | Jan. 4, 1994 |
| Kim et al. (Kim) | 6,225,688 B1 | May 1, 2001 (filed Feb. 4, 1999) |
| Hsuan et al. (Hsuan) | 6,236,109 B1 | May 22, 2001 (filed Feb. 1, 1999) |
| Haba et al. (Haba) | 6,376,904 B1 | Apr. 23, 2002 (filed Oct. 10, 2000) |

Claims 1 and 18 stand rejected under 35 U.S.C. § 102 as being anticipated by Mauritz.

Claims 1-24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Haba, Mauritz, Hsuan, and Kim.

We refer to the Final Rejection (Paper No. 4) and the Examiner's Answer (Paper No. 7) for a statement of the examiner's position and to the Brief (Paper No. 6) for appellant's position with respect to the claims which stand rejected.

OPINION

Appellant's Brief does not address the § 102 rejection of claims 1 and 18 over Mauritz. In the arguments submitted for instant claim 1 in response to the § 103 rejection, however, appellant contends that Mauritz does not teach a packaged structure. Mauritz is explicit, according to appellant, that different chips are used.

The examiner acknowledges that Mauritz discloses a plurality of chips, as set forth in the rejection at page 4 of the Answer. However, the examiner notes that claim 1 does not specify the type or extent of "packaging," and finds that the chips in the reference are inherently "packaged." The examiner further addresses, in § 11 of the Answer, the deemed lack of limiting factors associated with the term "packaged" as used in the instant claims.

Instant claim 1 purports, in the preamble, a "packaged integrated circuit comprising...." The language suggests a monolithic (i.e., single integrated circuit or IC) structure. The specification (e.g., bottom of page 4), however, refers to the disclosed structure as a packaged integrated circuit device. In any event, the preamble of instant claim 1 appears to set forth an intended use for the elements recited in the body of the claim, as there is nothing specifically related to structure of the "packaging" in the

remainder of the claim. The preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention. In re Paulsen, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

To the extent that the term “packaged” may limit the scope of instant claim 1, appellant has not shown that the examiner’s position with respect to the breadth of the term is erroneous. We agree with the examiner that the chips described by Mauritz are necessarily, in normal use, enclosed within a structure, and thus may fairly be considered “packaged” within the meaning of instant claim 1. Appellant has not shown otherwise, either by probative evidence or persuasive argument as to why the examiner’s position might be thought incorrect.

We thus sustain the § 102 rejection of claim 1 over Mauritz. We also sustain the § 102 rejection of claim 18, as appellant has neglected to explain why the examiner should be deemed as having erred in the finding of anticipation with respect to Mauritz.

Claims 1-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Haba, Mauritz, Hsuan, and Kim. Appellant groups the claims into three separate groups represented by independent claims 1, 10, and 18, respectively, which we also select as representative in this appeal. See 37 CFR § 1.192(c)(7) (1997).

The § 103 rejection of claims 1 and 18 could be sustained in view of Mauritz alone, as appellant has not shown error in the rejection for anticipation. A claim that is anticipated is also obvious under 35 U.S.C. § 103; anticipation is the epitome of obviousness. See, e.g., Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220

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USPQ 193, 198 (Fed. Cir. 1983); In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

Appellant submits that Mauritz “teaches away” from putting the relevant components in one package. “A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” Para-Ordnance Mfg. v. SGS Importers Int’l, 73 F.3d 1085, 1090, 37 USPQ2d 1237, 1241 (Fed. Cir. 1995) (quoting In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994)). Appellant does not point out where Mauritz might warn the artisan against “packaged” components, and we do not find such a teaching. Cf. Para-Ordnance, 73 F.3d at 1090, 37 USPQ2d at 1241: “That the Browning Hi-Power does not have a converging frame does not require a finding that it ‘teaches away.’ While it does not teach convergence, there is nothing about the Browning Hi-Power to warn a person of ordinary skill against using convergence.” Moreover, appellant’s arguments alleging a “teaching away” are not persuasive with respect to claims 1 and 18 because appellant has not shown that the preamble recitation of “packaged” represents a limitation that requires something different from the teachings of Mauritz.

We find the remainder of appellant’s arguments to allege deficiencies in individual references that have been applied, rather than addressing their combined

teachings. Nonobviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) (citing In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)).

Hsuan teaches the advantages of multi-chip packages (col. 1, ll. 18-34), containing chips that may include processors and volatile memory (id. at ll. 34-40; col. 3, ll. 41-42). Hsuan thus teaches a “packaged” device, as recited in the preamble of instant claim 1, and two of the three elements recited in the body of the claim. Mauritz teaches the advantages of a cross-point memory; namely, the capability of replacing a defective memory chip in situ, obviating physical removal and replacement of the defective chip. Col. 1, ll. 33-43; col. 3, ll. 51-62. The artisan would thus have found it obvious to provide the “packaged” device taught by Hsuan with a cross-point memory as taught by Mauritz. The teachings of these two references alone demonstrate the prima facie obviousness of the subject matter as a whole of instant claim 1.

With respect to the subject matter of claims 10 and 18, Haba teaches all that is recited in the claims except for a cross-point memory on a separate die. The reference teaches incorporating several IC die into a single package (col. 1, ll. 14-19), which IC die may comprise one or more types of diverse IC devices such as a processor and memory (col. 13, ll. 33-36). In view of the afore-noted advantages of cross-point memories revealed by Mauritz, the artisan would have found it obvious to place a cross-point memory on a die within a packaged device as taught by Haba. Thus, the

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teachings of these two references alone demonstrate the prima facie obviousness of the subject matter as a whole of instant claims 10 and 18.

We therefore sustain the rejection of claims 1-24 under 35 U.S.C. § 103 as being unpatentable over Haba, Mauritz, Hsuan, and Kim. For the subject matter of the representative independent claims, we consider the Kim reference to be merely cumulative in its teachings.

CONCLUSION

The rejection of claims 1 and 18 under 35 U.S.C. § 102 and the rejection of claims 1-24 under 35 U.S.C. § 103 are affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a). See 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

JAMES D. THOMAS
Administrative Patent Judge

KENNETH W. HAIRSTON
Administrative Patent Judge

HOWARD B. BLANKENSHIP
Administrative Patent Judge

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